



Missouri
Department of
Natural Resources

KCP&L Greater Missouri Operations Company
Power Plant Name: South Harper
Electric Generation and Emissions in 2010

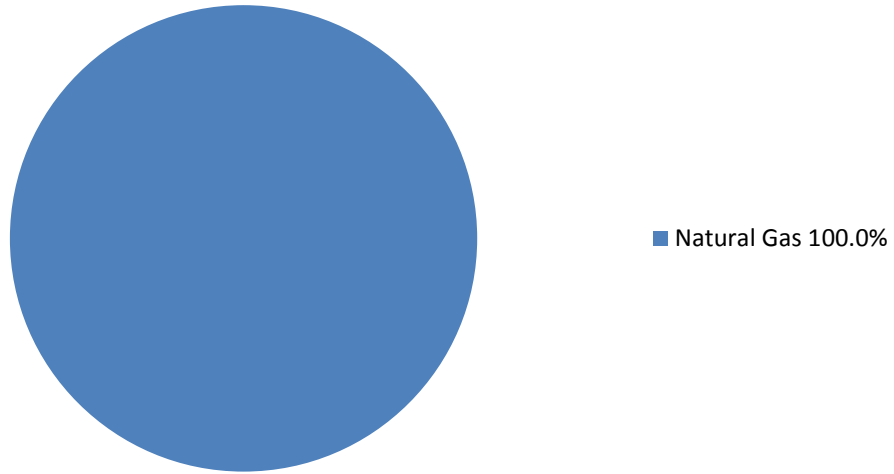
Generation Tables

| | Fuel Consumption, MMBTUs | Percent of Total | | Net Electric Power Generated, MWh | Percent of Total | |
|------------------------------|--------------------------------|------------------|---------------|--|------------------|---------------|
| Non-renewable sources | | | | | | |
| Coal | | | | | | |
| Natural Gas | 632,335 | 100.0% | 100.0% | 57,942 | 100.0% | 100.0% |
| Petroleum | | | | | | |
| Nuclear | | | | | | |
| Other | | | | | | |
| Non-renewable total | 632,335 | 100.0% | 100.0% | 57,942 | 100.0% | 100.0% |
| Renewable sources | | | | | | |
| Biomass | | | | | | |
| Hydroelectric | | | | | | |
| Landfill Gas | | | | | | |
| Solar | | | | | | |
| Waste Fuels | | | | | | |
| Wind | | | | | | |
| Wood | | | | | | |
| Renewable total | | | | | | |
| Grand total | 632,335 | | 100.0% | 57,942 | | 100.0% |

| Fuel Type | Physical Units | Number of Units |
|-------------|----------------|-----------------|
| Natural Gas | MCf | 632,335 |



Net Generation by Fuel Type, 2010 for South Harper





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Power Plant Nameplate information for South Harper

| Plant Name | County Location | Generator | Generator Type | Generator Status | Nameplate Capacity (MW) |
|---------------------|------------------------|---------------------------------|---|-------------------------|--------------------------------|
| <i>South Harper</i> | | <i>All Operating Generators</i> | | | <i>1,404.0</i> |
| South Harper | Cass | GT1 | Combustion (Gas) Turbine (includes jet engine design) | Operating - in service | 468.0 |
| South Harper | Cass | GT2 | Combustion (Gas) Turbine (includes jet engine design) | Operating - in service | 468.0 |
| South Harper | Cass | GT3 | Combustion (Gas) Turbine (includes jet engine design) | Operating - in service | 468.0 |



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Emissions from Electricity Generated in 2010: South Harper

| | CO2 Equivalent (TONS) | Carbon Dioxide (CO2) (TONS) | Methane (CH4) (TONS) | Nitrogen Dioxide (NO2) (TONS) |
|--------------|--------------------------------------|--|-------------------------------------|--|
| South Harper | 292,808 | 147,826 | 2,788 | 279 |

| | Sulfur Dioxide (SO2) (TONS) | Annual Nitrogen Oxide (NOx) (TONS) | Summer Nitrogen Oxide (NOx) (TONS) |
|--------------|--|---|---|
| South Harper | 0 | 0.0000 | 0.0000 |

Identified Flue Gas Desulfurization (FGD) controls installed on South Harper power plant

| Plant | Control Equipment | Sorbent Type |
|--------------|---------------------------|---------------------|
| | No FGD Controls Installed | |

Identified Flue Gas Particulate (FGP) controls installed on South Harper power plant

| Plant | Control Equipment |
|--------------|---------------------------|
| | No FGP Controls Installed |



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Notes:

Generation, emissions and pollution control data include power plants owned by the utility and located in Missouri.

Emissions data calculated by Missouri Department of Natural Resources, Division of Energy, from EIA Fuel Consumption Data

Fuel Consumption and Generation Data from United States Energy Information Administration, Form 923, United States Department of Energy
<http://www.eia.gov/electricity/data/eia923>

Pollution control data (FGD and FGP equipment) from United States Energy Information Administration, Form 860, United States Department of Energy
<http://www.eia.gov/electricity/data/eia860/index.html>

Emissions factors for fuel-based generation from United States Environmental Protection Agency "Emission Factors for Greenhouse Gas Inventories", November 7, 2011,
<http://www.epa.gov/climateleadership/documents/emission-factors.pdf>